

REMARKS

Claim 1 has been amended. Claim 8 has been canceled. No new matter has been introduced. Claims 1, 2, 4, 5 and 7 are now pending in this application.

Claims 1, 2, 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsushita (EP 307,509) in view of Saito et al. (U.S. Patent No. 6,080,263) ("Saito"). The rejection is respectfully traversed.

Claim 1 recites, *inter alia*, "a sensor comprising a means for detecting if the portion of the protective tape on a wafer is removed by said cutting element, said sensor being positioned behind said cutting element relative to said first predetermined distance from the perimeter of said wafer and relative to said protective tape to perform the detecting." Claim 1 further recites, *inter alia*, "a circuit comprising a means for initiating corrective action to stop the transport mechanism from moving the wafer to the grinding apparatus when the sensor detects that the protective tape is not removed from a wafer by said cutting element, when said sensor is coupled to said circuit."

As agreed by the Office Action, Matsushita does not teach or suggest "a sensor comprising a means for detecting if the portion of the protective tape on a wafer is removed." The Office Action, however, seeks to overcome this deficiency by combining Saito. Saito is cited, by the Office Action, for teaching that it is well known in the art that tape burs formed during the tape cutting step ultimately destroy the wafers during the backgrinding step and thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the sensor of Matsushita to check to see if a tape bur was formed on the wafer and for causing the control to prevent the wafer from being transported to the backgrinding device if a bur is detected. (Office Action at 3).

The Office Action goes on to argue that the prior art remains relevant because the claim language is merely directed towards intended use and because Matsushita does, in fact, detect improper cutting whenever the wafer is chipped. Based on that detection of the improper cutting, it can be inferred that a tape bur existed. (Office Action at 5). Additionally, the Office Action states Saito clearly discloses the desire to prevent tape burs from entering the backgrinding device. In sum, according to the Office Action, the Examiner believes one of ordinary skill in the art would certainly glean from Saito that there is a need to prevent tape burs from entering backgrinding devices. The sensors of Matsushita are photoelectric sensors and are clearly capable of sensing the presence of a tape bur and thus, there is no specific language in the claims that is not found in the prior art. (Office Action at 6).

Applicant respectfully submits that the claims are amended to address each concern of the Office Action. Claim 1, as amended, is more than merely a recitation of intended use without any specific structure. Neither Matsushita or Saito are capable of “detecting if the portion of the protective tape on a wafer is removed by said cutting element” and “initiating corrective action to stop the transport mechanism from moving the wafer to the grinding apparatus when the sensor detects that the protective tape is not removed from a wafer by said cutting element.” The cited references do not teach or suggest the subject matter as recited in claim 1.

Matsushita, as set forth above, fails to teach or suggest “a sensor comprising a means for detecting if the portion of the protective tape on a wafer is removed.” However, the Office Action makes the assumption that it can be inferred from Saito that a tape bur exists if an improper cutting is detected. However, any number of conditions can result in a failure to remove tape bur despite proper positioning. For example, a defective cutting element or a defective tape, which is sufficiently thick to be

resistant to cutting, may result in a failure to remove a tape bur even if the wafer and cutter were properly positioned.

Applicant also respectfully submits that it is improper to combine the references in the manner suggested by the Office Action. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found in the references themselves. In re Fine, 837 F.2d 1071, 5 USPQ.2d 1596 (Fed. Cir. 1988). Although Matsushita “may be capable of being modified to run the way [the applicant’s] apparatus is claimed, there must be a suggestion or motivation in the reference to do so.” In re Mills, 916 F.2d 680. There is no suggestion or motivation in any of the references for combining them to arrive at the claimed invention. In fact, Matsushita and Saito are entirely different systems. The Office Action is using impermissible hindsight by using the claims of the present invention as a road map to improperly combine the references. See Ex part Clapp, 227 U.S.P.Q. 972, 973 (Bd. App. 1985); M.P.E.P. §2144. This is another reason why the rejection should be withdrawn.

Consequently, there is no support for the Office Action’s conclusion that either of Matsushita’s sensors are capable of sensing whether a tape bur was “completely removed” during the cutting operation. Nor is it obvious to one of ordinary skill in the art at the time the invention was made to combine or modify the cited references to achieve the present invention.

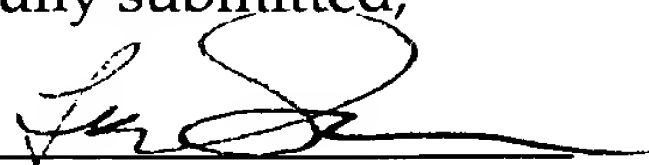
Accordingly, Applicant respectfully submits that Matsushita and Saito fail to teach or suggest the limitations of the claimed invention. Hence, claim 1 is believed to be allowable. Claims 2, 4, 5 and 7 depend from claim 1 and are allowable along with claim 1. Applicant respectfully requests that the rejection be withdrawn and the claims allowed.

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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